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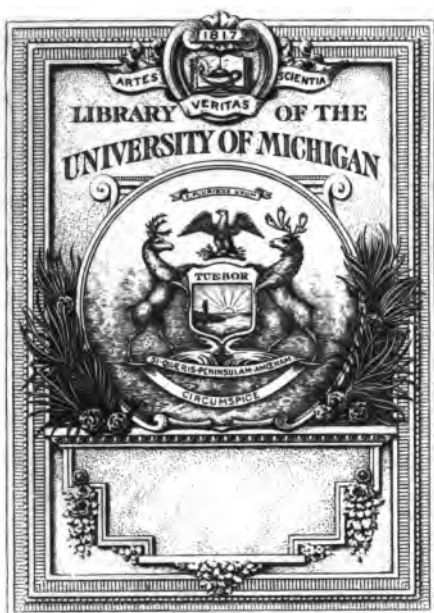
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REPORT

ON

TRADE CONDITIONS IN MEXICO

BY

CHARLES M. PEPPER

SPECIAL AGENT OF THE DEPARTMENT OF COMMERCE AND LABOR

TRANSMITTED TO CONGRESS IN COMPLIANCE WITH
THE ACT OF FEBRUARY 3, 1905, AUTHORIZING
INVESTIGATIONS OF TRADE CONDITIONS ABROAD

MARCH 5, 1906

Referred to the Committee on Finance
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DEPARTMENT OF COMMERCE AND LABOR,
OFFICE OF THE SECRETARY,
Washington, March 5, 1906.

SIR: I have the honor to herewith transmit, in compliance with the act making appropriations for the legislative, executive, and judicial expenses of the Government for the fiscal year ending June 30, 1906, approved February 3, 1905, the final report of Special Agent Charles M. Pepper on trade conditions in Mexico.

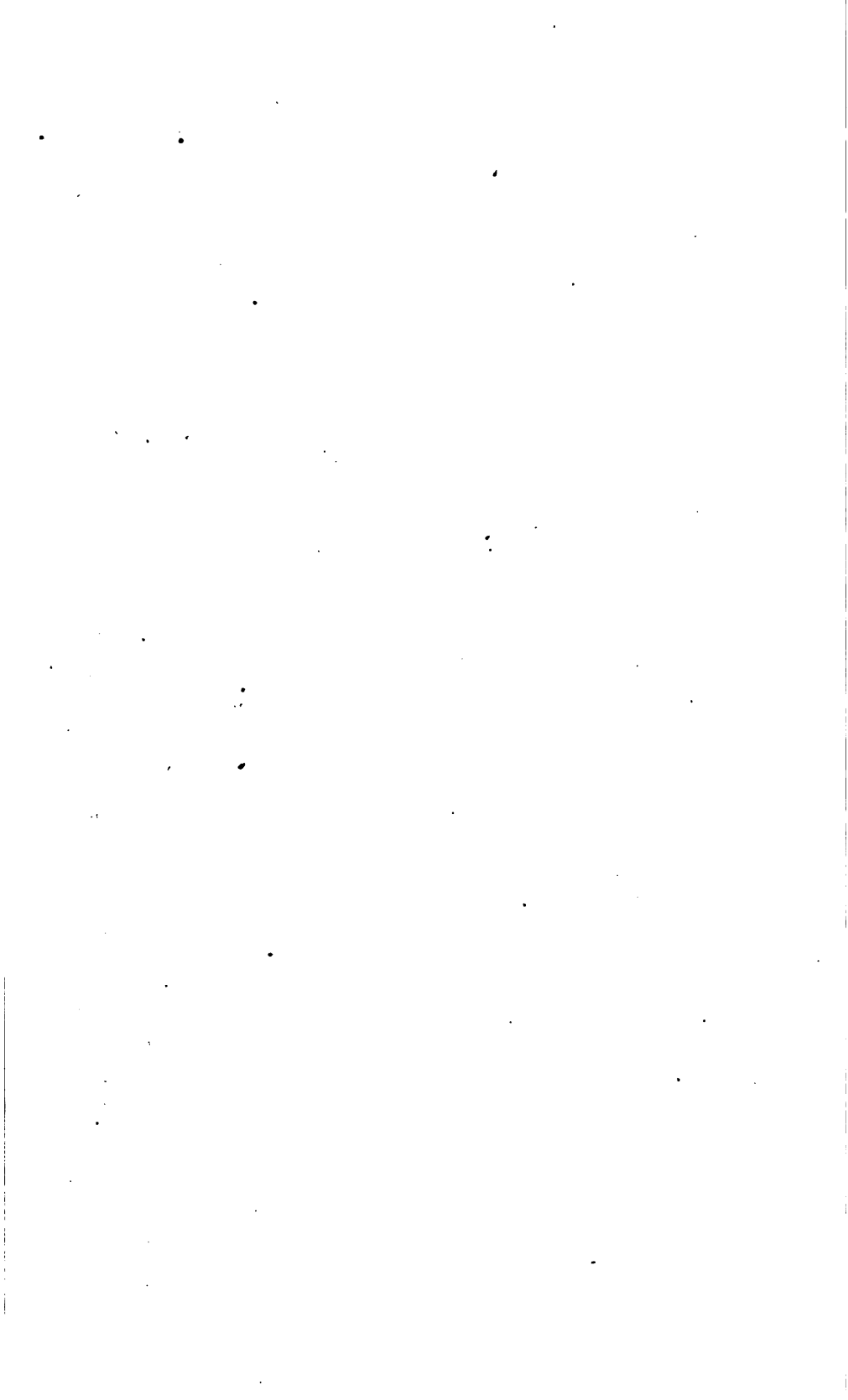
Very respectfully,

V. H. METCALF,
Secretary.

The PRESIDENT OF THE SENATE.

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LETTER OF SUBMITTAL.

WASHINGTON, *February 7, 1906.*

SIR: I submit herewith a report on Trade Conditions in the Republic of Mexico, based on information gathered under the instructions of the Department of Commerce and Labor.

It is impossible for the American people not to share the satisfaction that is felt over the financial stability which now exists in that Republic, due to the establishment of a fixed relation between the silver currency and gold. The influence of the monetary laws and of the administrative action giving them force is reflected both in domestic transactions and in international commerce, while the effect on foreign investments is very beneficial.

With its fiscal affairs established on a known basis, the Government is now free to pursue other measures for the economic and industrial development of the country, including the promotion of agriculture through irrigation and immigration.

In following my investigations I have revisited various localities and have had the opportunity of making comparisons with previous inquiries into industrial and commercial conditions. The fact which has most impressed itself on me in the Pacific coast region, the central plateau, the Gulf districts, and the Isthmus of Tehuantepec has been the universality of the conditions of progress. Every section promises further development, and therefore enlarged markets.

The increase in the investments of United States capital is no longer confined to railroads and the mining industry. The overflow of our prosperity is encouraging investors in smaller lines. The direct returns on the capital which has gone into railways and similar large enterprises can now be calculated with certainty because of the fixed valuation given to the currency of the country. The indirect returns which should come from the sale of goods that are the product and manufacture of the United States are not so easily determined. Yet it is apparent that these indirect returns should be greater, and can be made greater.

Sales of \$50,000,000 of domestic merchandise annually are gratifying, but it would be more satisfying to know that they form a larger percentage of the total Mexican imports. The truth is that Mexico

for an indefinite period must continue to buy abroad a large proportion of the goods she consumes, and it is of primary importance to understand not only the increase in the volume of purchases, but also the increased buying power per capita which is being developed, in order to participate in the enlarged trade.

The nature of the market for American products is all embracing. Mining machinery naturally will be supplied by the United States, but the installation of manufacturing plants will not be widespread because of the slow advance of Mexico to a manufacturing status. Without undertaking a full review of innumerable lines of trade, I have outlined the avenues of information that should be followed and the general requirements that are equally as important as technical descriptions and price lists. These relate to tariff schedules, customs regulations, methods of packing, credits, transportation, and commercial drumming. They are given with a special view of enabling the American manufacturer to comprehend the competitive character of the Mexican market and to put him in a position to meet his European rival on an equal footing.

I am, sir, respectfully, yours,

CHARLES M. PEPPER,

Special Agent of the Department of Commerce and Labor.

THE SECRETARY OF COMMERCE AND LABOR,

Washington, D. C.

REPORT ON TRADE CONDITIONS IN MEXICO.

FISCAL AND INDUSTRIAL PROSPECTS.

The trade of the United States with Mexico grows steadily, but Europe still has too large a share. In noting the increase in the volume, the fact that the percentage does not increase as it should is overlooked. We are so in the habit of pluming ourselves on our expanding exports that we do not realize how much more they might be expanded by systematic effort.

In the fiscal year 1905 Mexico imported goods to the value of \$86,000,000, and of this amount the United States contributed domestic merchandise valued at \$45,000,000. The previous year the imports from the United States had been almost as much, while the total of Mexican imports from all countries was only a fraction over \$78,000,000. This exhibit does not encourage the tendency to self-congratulation which obtains when the figures of the trade with Mexico are given without analysis.

The calendar year 1905 makes a better showing, since the exports of domestic merchandise from the United States during that period reached the total of \$50,377,000. While the complete Mexican statistics are not yet available, the total imports of foreign merchandise were reported to be more than \$90,000,000. For the calendar year the United States therefore had from 55 to 57 per cent of that commerce. In view of the proximity of Mexico, the complete system of railway communication, the large amount of American capital invested, and the increasing number of Americans settling there, the proportion of imports of merchandise from the United States should be about 75 per cent, Europe and the rest of the world being entitled to one-fourth.

TEMPORARY INCREASE IN CEREAL IMPORTS.

It must also be known that temporary conditions swelled the imports from the United States during the last six months of the calendar year. Ordinarily Mexico produces breadstuffs enough to feed her own people and the imports are trifling; but a partial failure of the cereal crops in 1905 caused heavy importations of wheat and corn from the United States, the Government having modified the tariff duties for the benefit of the consumers. This remission of duties was extended

till July 1, 1906, and it accounts for some of the increased importations since January 1, 1906. How great the increase of the cereal importation has been is shown by the following comparison:

IMPORTS OF WHEAT AND CORN INTO MEXICO IN 1904 AND 1905.

Year.	Wheat.		Corn.	
	Quantity.	Value.	Quantity.	Value.
	<i>Bushels.</i>		<i>Bushels.</i>	
1904	28, 117	\$24, 555	164, 814	\$94, 557
1905	920, 885	902, 305	1, 113, 406	702, 000
Increase	892, 768	877, 750	948, 591	607, 443

Thus in the calendar year 1905 the value of the importations of wheat and corn, staples which Mexico usually produces for herself, was \$1,500,000 greater than during the preceding twelve months. In the self-complacent feeling over increased exports to Mexico it is not well for the United States to count this item as permanent, for we would thus ignore the normal conditions of cereal consumption and production in Mexico. Of much greater consequence is the advance in the imports of iron and steel products, builders' hardware, electrical apparatus, boots and shoes, and other articles for which our manufacturers may look for a permanent and widening market.

BALANCE OF TRADE TIPPING TO MEXICO.

The United States has taken a gratifying part in the phenomenal development of Mexican commerce during the last ten years, but all this time the proportion of Mexico's exports to the United States, and more especially exports of mineral products, has been growing until now it is only a question of a short time until the balance of trade will be in favor of Mexico. During the period from 1894 to 1904 Mexico increased her imports from the United States by 123 per cent, but she also increased her exports to this country by 155 per cent. The condition that now obtains is illustrated by a comparison of the last two calendar years. The domestic exports of the United States to Mexico and the imports from Mexico were as follows:

EXPORTS FROM AND IMPORTS INTO THE UNITED STATES TO AND FROM MEXICO IN 1904 AND 1905.

Year.	Exports.	Imports.
1904	\$44, 544, 000	\$48, 982, 000
1905	50, 377, 000	50, 218, 000

This shows that to-day a substantial equilibrium exists. The scale unquestionably is now tipping in favor of Mexico, due chiefly to the prosperity of the mining industry.

While the development of Mexican mines to the degree that may give a balance of trade against the United States is not an unfavorable economic situation for either Republic, yet the fact that the Mexican purchasing power is increasing so substantially should arouse American shippers and producers to the importance of seeing that the proper percentage of this increased buying ability is expended in the United States. The amount that Mexico buys is growing every month, and this growth is due not so much to increased population as to increased purchases per capita. The growth from population will come later.

While we are not gaining the proportion of Mexican trade that should be ours, there is an awakened though somewhat vague comprehension of the possibilities of that market, not merely as a means of disposing of surplus products, but also as a field for the continuous and uninterrupted sale of American goods. A desire is manifest to know more of its opportunities and its requirements. In making the investigation of trade conditions, under the instructions of the Department, I have been governed chiefly by the information which would be of benefit to the smaller manufacturers and shippers in the United States, and also to prospective settlers who will become the missionaries of American trade. The groups of financiers who are interested in railway properties and in mines understand the industrial and commercial prospects. The manufacturer, dealer, or investor whose capital is limited has not the same facilities for familiarizing himself with the situation, and he does not have a full knowledge of the present soundness of Mexican finances. •

BENEFIT OF STABLE CURRENCY.

For purposes of international commerce Mexico may now be said to be on a gold basis. The various monetary laws under which the free coinage of silver was stopped and the Mexican silver peso or dollar given a valuation equivalent to that of 75 centigrams of fine gold, or 49.8 cents measured in United States currency, need not be described in detail. In their workings they have proved satisfactory, as have the collateral measures undertaken with the purpose of enabling the Government to regulate exchange and free it from violent speculation.

The controlling fact of importance to the exporter in establishing credits, in billing goods, in granting discounts, and in arranging for remittances is that his customer is no longer under the stress of guessing what the fluctuating silver value of the goods will be and what prices he can pay in gold in order to sell in silver currency at a profit. The Mexican home buyer now pays the jobber or retailer in silver currency as formerly, but on a known valuation, so that his money buys exactly as much proportionately as if he were paying in gold. That is, the price is governed only by the ordinary movements of trade,

the world fluctuations in silver becoming trifling when reduced to terms of local business.

The Mexican monetary laws are of transcendent importance in their effect on commercial transactions. The purpose of the legislation was to establish a definite relation between the Mexican currency and the currency of the United States and other gold-standard nations, and this has been done. Both domestic and international commerce have adjusted themselves to this relation. The temporary depression of the silver-mining industry, which it was expected would follow the suspension of free coinage, and the consequent dullness in other industries and of trade, did not come. The compensation provided in the revision of the mining laws and the relieving of the silver products from many federal and local imposts, taken with the Government provisions for making advances on bar silver, has been one means of avoiding this crisis. The unexpected rise in silver has probably been a more potent influence. About the only uncertainty regarding Mexico's financial situation has grown out of this unexpected development. Full provision was made for maintaining exchange and holding the Mexican silver dollar at a valuation in commerce equal to that fixed by the monetary laws.

SELLING SILVER DOLLARS FOR GOLD.

When, on account of the demand for silver in India and elsewhere, the value of the Mexican silver dollar was raised a fraction above 50 cents, an entirely new condition was created. Instead of the Government having to maintain a parity, which would insure a fixed purchasing power not below a certain level, a fractional increase of the purchasing power for Mexican silver was created. Under the direction of the finance commission Mexican dollars were exported to London and New York at a slight profit and gold obtained in exchange. Legislation was also enacted by the Congress providing for an issue of gold certificates.

Some question has been raised whether, in view of the new condition, Mexico has made sufficient provision for this reserve. Secretary Limantour, the brilliant minister of finance under whose guidance Mexican credit has constantly risen, and who inaugurated the new monetary laws, in making his report to the Congress in December, 1905, summed up his impressions as follows:

It seems prudent to anticipate during 1906, and perhaps also during 1907, occasional periods of stringency, occasioned by the abundance or scarcity of drafts on foreign parts succeeding one another with a sort of oscillatory movement until such time as the effects of the monetary reform shall bring about a condition of stable equilibrium. Such has been the experience of other countries which have had recourse to measures similar to those adopted by us to attain a money of stable value. The stiffening of the rate of interest and the consequent restriction of enterprise, more particularly in the direction of speculation, will perhaps occasion a passing malady

which, if matters be considered rightly, is apt to be more beneficial than hurtful. No more than individuals ought nations to become unduly accustomed to situations of prosperity, for the ease with which capital can be secured at such times leads inevitably after a while to prodigality and unsound speculation.

It should be observed that the finance minister's conservatism and caution refer to domestic transactions. In relation to international commerce there is no question that Mexico's resources and her high credit will enable her to strengthen her gold reserve as developments or emergencies demand. The Republic began the year with a surplus, a growing income from internal sources and customs, and expanding exports. The exporter or foreign manufacturer has nothing to fear from his Mexican customer on this point. Mexico is more than solvent. She is financially stable.

WAGE SCALE AND LABOR EFFICIENCY.

The result of the increased wage scale, for that is what the gold valuation of the Mexican silver currency amounts to, is by some economists looked upon as doubtful. Will it permanently increase the purchasing power of the laboring population? There would seem to be no doubt on this point, yet many employers in their views are on all fours with the doubting economists. From long familiarity with the peon laborer and his habits, they insist that where formerly he would work four or five days out of seven he now will work only three or four, since that number of days will give him just as much money as formerly the longer period afforded him and he will be content with supplying his demand on the same limited scale as in the past. It must be confessed that many individual illustrations of this tendency can be offered. The railroads especially have found it discouraging, and extra wages have not kept the peons from knocking off to observe all the religious and national holidays which the calendar presents. Yet against this is the steadiness of the employees in the cotton mills and in other industrial pursuits.

From my own observation I have found it impossible to believe that the peons in the high plateaus, who suffer intensely during the winter season, will not be willing to work as long as the advanced scale of wages obtains in order to procure some of the comforts of life. There is also the impetus to come from immigration, which during the next few years promises to be pronounced enough to add materially to the number of wage-earners. Making full allowance for the individual cases which can be cited, I am still of the opinion that as a whole the mass of the Mexican population will work as many days with increased wages as they did when earnings were measured on a depreciated and fluctuating scale. If this be true, the buying power of the 14,000,000 inhabitants of Mexico has been increased by the monetary reforms, though it will take years to determine to what extent.

FLOW OF FOREIGN CAPITAL.

Largely because of the financial stability foreign capital, both from the United States and from Europe, is again flowing into Mexico. In the case of European investors its most marked feature is in the increase of bank holdings. The two leading financial institutions, which are controlled in London and Paris, respectively, and the chief native bank have added largely to their loanable funds by means of increased capital. French money is also going into mines. The bank-stock movement became so pronounced that many of the smaller institutions were racing to increase their shares in the same manner, though the holdings were almost entirely local and no market existed for them abroad. These proposed expansions were becoming too much like speculative inflations, and the Government stepped in and stopped the financial ballooning. In order to limit the circulation of specie or paper money to the necessities of the country, the Government will not permit local banks to increase their capital stock without first complying with certain restrictions prescribed by executive decree. The creation of trust companies is now proposed as a means of finding employment for the overflow bank capital.

On the part of the United States, while American money has added to the capital in new financial institutions and an increasing amount of Mexican bank stock is held by banks and individuals in this country, the greatest inflow of capital continues to be in railroads, mines, and smelters, with some diversion into car equipment and similar industries, especially those based on the generating of electricity by water power. There is also an increase in the amounts invested in business, and more particularly in land purchases. Taking the result of the investigation made by the consul-general some years ago, and allowing for the appreciation of values since then and the fresh investments, an estimate of \$650,000,000 to \$700,000,000 American money invested in Mexico at the present time does not seem to be an excessive one. It is a daily argument for larger sales of American goods in the neighboring Republic and for systematic endeavor to obtain a stronger foothold in these increasingly valuable markets.

PROTECTIVE PRINCIPLE OF NEW TARIFF.

In order fully to grasp the opportunities which the import trade of Mexico offers it is necessary to know the existing tariff, both in its principle and in its application. I discuss here the principle, leaving the application for later explanation. This tariff took effect September 1, 1905. The need for revision was said to be due to the changes in the price level of commodities produced by the monetary legislation. It was assumed that one of the leading consequences of the new

law was the low rate of foreign exchange, making it possible to sell foreign merchandise in Mexican markets at prices lower than those which previously prevailed. That is to say, the result of raising the value of the silver peso or Mexican dollar was to lessen the prices of commodities as expressed in terms of Mexican currency. While this circumstance favored the consumers of imported goods, the assumption was that it also caused certain disturbances in the conditions of national production, especially in those branches which could attain their development only because of the high rate of foreign exchange that prevailed during the last few years. It was also assumed that this injury, theoretical or actual, could be repaired by an increase of duty on the products affected, the proceeding being limited strictly to the protection required by those industries. On the other hand, it was declared desirable to reduce the price of commodities as far as compatible with the legitimate interests of agricultural industry, so as to facilitate the importation of raw materials at the lowest possible cost and to reduce the duties on manufactured articles which heretofore had been imported in small quantities owing to the prohibitive duties levied upon them.

While this is the stated purpose of the revision, and while the very liberal provisions of laws and concessions for the importation of railway equipment and mining machinery are not injuriously modified, nevertheless in its operation the new tariff raises many duties relatively as compared with the schedules under the old monetary régime. Its provisions are strongly protective, and in addition to fostering home industries it appears to increase the cost of living as measured by the prices of food stuffs, wearing apparel, and similar articles. At the same time the ability of the Mexican consumer to buy is increased, temporarily at least, if he cares to exert his labor sufficiently. The question is whether the home industries that are fostered and stimulated will supply his wants at the expense of importations. Many of these manufacturing enterprises, from the national patriotic standpoint, are making gratifying advances, yet the rate of that progress is still problematical.

PROBLEM OF IRON AND STEEL INTERESTS.

The iron and steel industry up to this time has not progressed notably, although the Durango iron mountain in itself furnishes unlimited ore, and although metallurgical fuel of a more or less satisfactory character may be obtained. A number of mills in different parts of the Republic turn out from 20 to 50 tons daily, but this is a small contribution to the industrial needs. The largest plant, splendidly equipped and modern in every respect, is located at Monterey, 170 miles from the Texas border. The Coahuila coal fields are easily accessible and the ore from

Durango meets their output here under conditions somewhat similar to the meeting of the ores of the Great Lakes and the coal from West Virginia and Pennsylvania in the Pittsburg and Youngstown districts.

Iron and steel making, in all its branches, has received special encouragement from the Government, and in the revision of the tariff the duty on steel rails was placed high enough to afford ample protection. Yet it does not appear likely that for many years the Mexican demand for rails will be supplied by the domestic production. The chief trouble is said to be in securing the class of skilled labor that is essential. Iron and steel workers from the United States demand higher wages than they obtain at home and no plant can expect to manufacture and market profitably steel rails on such a wage basis. The future of the industry therefore lies in developing in Mexico workmen of the same type that are found in the mills of the United States. The process is a slow one. The lack of available skilled native labor must be taken into consideration in determining the time in the future when Mexican iron and steel industries will render the country measurably independent of foreign importation allowing that the raw materials of the right quality can be assembled on an even plane economically with those of foreign countries. Some headway has been made in foundries and also in the car shops of the railways in training the native labor, but the numbers who possess the qualities necessary for skilled workmanship of this kind are limited.

A similar condition was encountered when extensive glass works were inaugurated at Monterey. Wage and other controversies caused the foreign workers to be replaced, but the output of the native workmen was unsatisfactory and the industry did not prove a paying one.

Reviewing the adverse factors it may be said that the Mexican capitalists who have gone into the iron and steel and kindred industries are not easily discouraged. The failure of one experiment does not cause them to quit or to divert their capital into other currents. They have more patience than American capitalists and are willing to wait longer for returns on their investments. The field exists for their persistence and very likely they will find a profitable basis, if not in making high-grade steel rails at least in manufacturing the very light rails which are used universally on the plantations for tramways and other light means of transportation. This demand is a constant one.

WATER POWER AND COAL.

Water power was the means of developing the cotton mills, and its application through electrical energy seems likely to be the basis of many other profitable enterprises which can not afford to use coal. If Mexico had been left to rely upon the industries which require steam coal her industrial progress would have been much slower than that of the last ten years. The smelters depend largely on imported

coal for their fuel, as do the railroad companies. The Coahuila coal fields are the only ones that have been successfully worked on a large scale, though Government commissions have reported that coal of various qualities exists in the States of Sonora, Veracruz, Puebla, Oaxaca, Michoacan, and Guerrero. Special hopes are held out regarding the anthracite fields in Sonora, yet it is remarked that the smelters there have not given up looking to Australia, and that Japan is proposing to deliver coke on the Pacific coast. Better transportation facilities undoubtedly will cause coal deposits that are now untouched to be exploited commercially, but this prospect is not definite enough to encourage the establishment of manufacturing plants independent of hydraulic power. A Government commission a few years ago estimated the production of coal and coke in 1905 at 2,000,000 tons, but the estimate has not been borne out.

The discovery of petroleum and the geological possibility of the Texas oil fields extending through the Gulf region of Mexico to the Isthmus of Tehuantepec are taken into account. The petroleum in the Ebano region near Tampico has shown its commercial possibilities and the Mexican Central Railroad is changing its locomotives into oil burners to be supplied from that district. Other railways may adopt the same course, but oil as fuel is not suitable for many manufacturing enterprises. The conclusion is that the scarcity of raw material, the lack of a sufficient supply of fuel which makes necessary the continuance of large imports of coal and coke, and the slow evolution of the peon agricultural classes into mechanics and artisans place the time remote when Mexican native industries will be able fully to meet the home demand for manufactured products. The moral is that since the importations are likely to increase the United States should be alive to its opportunity to share in this increase, especially since it furnishes so large a proportion of the foreign capital that is developing Mexico's resources.

SUCCESSFUL NATIVE INDUSTRIES.

The most successful national industry is the manufacture of cotton. Large sums of Mexican, French, and Belgian money went into these mills, and the very best machinery was imported, mostly from Europe. In spite of overcapitalization and ill-considered projects, the industry, fostered by high duties, has been unusually successful. The peon labor in this case has proven adaptable and efficient. Although a high grade of mechanical skill is not necessary in operating the looms and although many women and girls are employed, nevertheless the success of these mills shows that there is some degree of mechanical capacity among the masses of the Mexican population.

The native breweries also have been successful, though not to the extent of stopping the importation of beer from St. Louis and Mil-

waukee. Soap factories have developed into profitable local enterprises at Torreon and elsewhere. The manufacture of saddlery and harness is carried on with profit, but the work is largely done by hand, and the success of the industry is due to the adaptability to local customs. The effort to build up a national industry in the manufacture of explosives can hardly be classed as beyond the experimental stage; there is constant complaint from the miners against the dynamite monopoly for furnishing them with poor materials.

REVIVAL OF MINING.

The revival in all branches of the mining industry is one of the noteworthy features of the present economic situation. An actual increase in gold production has caused a development of new gold mines, and there is reason to expect that the output will continue to grow.

As already stated, the depression in silver mining, which was expected to follow the monetary change, has not come to pass. The industry is as active as at any period in the last twenty years, and fresh exploitations may be expected from time to time. Though the exports of silver ore have decreased there has been a notable enhancement in the bullion shipments, which indicates that a larger proportion of the ore is being reduced in Mexico. The increase in the shipments of the large smelters, some of which are not run to their full capacity, and the building of new ones, is a further sign of this tendency to reduce the ore and ship the bullion.

The lead output of Mexico, which ranges from 94,000 to 98,000 metric tons (2,204 pounds each) annually, has shown no marked increase, but the yield of copper from the inexhaustible Cananea district has become phenomenal. The production of all the mines in the fiscal year 1905 was 138,000 metric tons, an increase of 58,000 tons from the previous year. In 1901 the total was 33,000 tons, so that in less than five years the net increase has been more than 100,000 metric tons. It is reasonable to expect that the copper output will continue to grow, because the industry has proved profitable enough to provide a surplus for the opening up of fresh mines and for prospecting in new districts. Sonora especially may be expected to add greatly to its production, and the State of Guerrero is now providing transportation facilities which assure the development of the mines that have been discovered there.

The discovery of zinc in the northern region is comparatively recent. The districts thus far exploited lie near Monterey, in the State of Nuevo Leon; near Miñaca, in Chihuahua, and in San Luis Potosi. The zinc carbonates are shipped to the United States. Propositions have been made for establishing zinc smelters, but so long as

the present tariff of the United States remains there is no call to build such smelters in Mexico, since the output can be reduced more profitably in Colorado and Missouri.

RAILWAY BUILDING.

At the beginning of 1906 Mexico had approximately 10,500 miles of steam railways in operation. The renewal of activity in railroad building is notable. It is especially marked because after an active period of construction, extending over several years, there was an almost entire cessation. Main trunks and projected extensions were stopped entirely and only a few short spurs and local lines were built. The financial stability which the new monetary laws assured, and the certainty that the railroads would no longer be compelled to carry freight and passengers for fluctuating silver prices while meeting the interest on their bonds and other fixed charges in gold, provided the encouragement which was necessary again to turn capital into these channels. In consequence the country is entering on another era of railway construction. The importance of the present enterprises can not be overestimated. For the next few years there promises to be a large addition to the capital invested in Mexican railways, and this will cause heavy purchases of steel rails, rolling stock, and equipment. The revision of the tariff does not interfere or retard this form of development, since the free importation of material for five years, as provided in the general railway law, is not repealed.

GULF AND PACIFIC COAST SYSTEMS.

Longitudinal systems of railways are building or projected to afford through communication from the Rio Grande to the border of Guatemala. The completion of the line known as the Pan-American, which starts from the junction point of San Geronimo on the Tehuantepec National Railway and runs to the boundary, is now a matter of only twelve or fifteen months. A through Gulf line from the southeastern Texas border will probably be built in the near future, though the guaranty of the Mexican Government that no railway shall be permitted to bridge the Rio Grande for the next twenty years in competition with the merger or National system, in which it holds the controlling interest, stands as a bar to extensions from Texas along the Gulf, unless it be set aside by the courts as unconstitutional or is modified to meet the new conditions. Several of the projects for local lines in eastern Mexico, for which concessions have been granted, will form ultimate links in a through longitudinal Gulf line to Yucatan and possibly to Central America.

Another projected road is the Mexican Central Line from Mexico City direct to the port of Tampico. After many surveys a feasible route with a maximum grade of $2\frac{1}{2}$ per cent and without extreme curvature has been found. The Mexican Central officials expect that the line will be completed within thirty months. Its special significance is that the distance will be little greater than that from the port of Veracruz to the City of Mexico, 265 miles, and the line is expected to enhance the importance of the port of Tampico by giving railway rates that will enable it to supply the whole central region with freight on equal terms with Veracruz. This competition may prove of ultimate benefit to shippers by reducing freight charges.

The most important of the longitudinal projects, and one which is sure of realization, is along the Pacific coast. This is the extension of the Southern Pacific system from Guaymas, its present terminus on the Gulf of California in Sonora, south through the States of Sinaloa and Jalisco and the Territory of Tepic, connecting Mazatlan, San Blas, and other ports and reaching Guadalajara. A part of this system will also open up the Yaqui River Valley in Sonora and insure railway connections toward the northern border. The Kansas City, Mexico and Orient Railway will be crossed at Fuerte. The main line, 720 miles in length, is to be completed within seven years. The Government has granted, in the form of cash subsidies and bonds, subventions to the amount of \$7,500,000. The general direction, with Guadalajara considered as the starting point, is northwesterly, crossing the Sierra Madres east of the port of San Blas, thence northerly to Mazatlan, Culiacan, and Alamos. At the latter place connection will be made with the Cananea, Yaqui River and Pacific Railway, which is now being built from Guaymas to Alamos. From Guaymas the Sonora Railway is in operation, crossing the international boundary at Nogales and connecting with the main line of the Southern Pacific at Benson, Ariz. Work is now under way on the lines in the States of Sonora and Sinaloa and the surveys have been completed for the entire route.

The commercial significance of this road is great, for it will at once increase the opportunities of California and the Southwest for Mexican trade, and in time it will provide San Francisco with direct through communication to Mexico City.

INTEROCEANIC LINES.

The lines from ocean to ocean, or more correctly from the Pacific coast to the Gulf of Mexico, which are looked upon as of the highest importance to the country, have progressed very slowly. This is because of the enormous engineering difficulties presented in crossing the successive ranges of the Sierra Madres. The Government has

secured one through line in the southeastern region where the mountain ranges do not offer such serious hindrances. This is the Tehuantepec National Railway across the Isthmus of Tehuantepec from Salina Cruz on the Pacific to Coatzacoalcos on the Gulf. It is 190 miles in length. It has historic interest because of the numerous projects in the past for a canal or a ship railway. The improvements made by strengthening the roadbed and by new bridges, the extensive harbor works at Salina Cruz and Coatzacoalcos, the traffic agreement for transporting Hawaiian sugar, and the other possibilities of international commerce in anticipation of the Panama Canal, or in competition with it, I have outlined in a preliminary report.^a The competition with the transcontinental lines of the United States appears to be actual rather than anticipatory.

THROUGH LINES.

The next through line from ocean to ocean that will be completed is the Mexican Central extension. This will place Manzanillo on the Pacific in communication, though the connection will be a very long and crooked one, with Tampico on the Gulf. The Mexican Central having bought the road from Manzanillo to Colima is now closing the gap between Tuxpam, the present terminus, and Colima, 50 miles distant. The great barranca or gorge of Beltran, which was said to present an insuperable obstacle, has been avoided by doubling a series of minor canyons. The Government has spent many million dollars on the harbor works at Manzanillo, and provision has been made for Asiatic commerce. The immediate benefit of the completion of this line will be to place the middle Pacific coast in direct rail communication with Mexico City, though there will also be some advantage in reaching the Gulf.

It has been the ambition of the Government to provide a through railway to the important port of Mazatlan by securing the extension of the International Railroad from Durango, a distance of 260 miles. The Government has been willing to grant liberal aid, and many projects have been formed, but capital has not yet embarked in the enterprise. To break the backbone of the Sierra Madres in this region is a task from which capitalists and railway builders shrink. The great engineering difficulties come after the eastern slopes have been climbed and the ocean is in sight, when it becomes necessary to make ladder-like drops which would require a large number of terrace-like tunnels. The importance of providing an outlet for Durango and the increasing wealth of that State in the end probably will secure the means of overcoming the engineering difficulties, and the prolongation will be carried on until the ocean is reached. But this is not an immediate prospect unless some of the projects of past

^aSee Daily Consular and Trade Reports, No. 2464, January 17, 1906.

years should be revived, or unless the Government, which is now a part owner in the International Railroad, should itself undertake the task.

More hope of piercing the Sierra Madres farther north is now held out. The Kansas City, Mexico and Orient Line, which contemplates reaching Topolobampo, on the Gulf of California, continues to receive extensions in the terms of its concessions and the amount of private capital enlisted in the enterprise has recently been enlarged. In the engineering sense the route east of Chihuahua is not especially difficult. The whole question relates to the western sections and the plan has been to conquer the Sierra Madres by building from either side of them. The railway now runs from Topolobampo to Fuerte, 65 miles, and the roadbed has been graded 35 miles to Choix, rails having been laid part of the way, so that 100 miles of this division may be considered built. Construction is also proceeding from Minaca, on the Chihuahua and Pacific Railroad, westward. While the rate of construction is not rapid, nevertheless the Orient Line seems to have a reasonable assurance of ultimately getting through the mountain barriers.

The Rio Grande, Sierra Madre and Pacific Railroad, which starts from El Paso and runs 160 miles west, is likely to be prolonged and in time form a junction with existing lines and their extensions in northern Sonora.

One handicap to the early realization of the various railway projects is the scarcity of labor. The peons or agricultural classes do not of themselves furnish sufficient labor material. They are not steady workers and are not well fitted for railway building. Some of the larger companies, with the consent of the Mexican Government, are arranging for Japanese, who promise to meet all requirements.

RAILS AND OTHER MATERIAL FROM THE UNITED STATES.

There is every reason why the mills in the United States should supply substantially all the steel rails imported by Mexico during the next five years. The new lines for the most part are using the 75-pound rail, and where old tracks are taken up and new ones substituted it is also in favor. The company building the Southern Pacific extensions in Sonora placed its first orders in Spain, as it was unable to have them filled satisfactorily in the United States. Belgian and German mills also have laid down rails at Tampico in sixty days, when the best that the Americans would promise was four months. But with a slight lessening of the extraordinarily active home demand, or with Mexico placed in the home category, the needs of the Mexican railroads should be supplied as promptly as those of the United States, both for new construction and for renewals. For the calendar year 1905 the imports of steel rails from the United States was 55,682 tons,

valued at \$1,486,000, as against 23,871 tons, valued at \$630,000, in the preceding year.

Bridge material and rolling stock must be furnished chiefly by the United States. The car-building industry in Mexico is in its infancy, and while it has good prospects it is hardly considered a factor in the present demand. The Mexican railways, after holding off as long as possible, came into the market late in 1905 for new equipment and swelled the large orders with which the various shops in the United States were swamped. The demand for locomotives was not so pronounced as for cars, because very heavy orders had been placed in 1903 and 1904, the importations in the latter year having amounted to \$1,738,000, while in 1905 the total reached only \$273,000. Orders already given will increase the amount for the current year.

RESULTS FROM RAILROAD CONSTRUCTION.

A twofold result will come from the railroads which are now under construction, or the construction of which will begin soon, under responsible companies with the necessary capital already provided. In a country of almost unlimited mining resources the development of mines is bound to follow when new means of transportation are provided. This will be true of the present era both as to main lines and as to spurs. Yet the chief commercial and industrial significance of Mexican railway construction during the next five or ten years will be not so much in its relation to the mining industry as to agricultural development. It will open up timber regions and large districts which are suitable both for temperate and tropical farming. The consequent encouragement to colonization and immigration will mean more settlers, and more settlers will mean more goods to be bought. It is well for the American manufacturer to know what the Mexican market of the future offers, for then he may take more heed of the market of to-day.

DEMANDS OF MEXICAN TRADE.

That a spirit of inquiry has been aroused with regard to enlarged trade opportunities is shown by a variety of circumstances. During my investigations throughout the Republic everywhere I have been met with statements from importers, bankers, and local merchants regarding the increasing number of letters that they are receiving from the United States. The consuls are overwhelmed with these inquiries. Americans engaged in industrial and other enterprises are also swamped with them. In addition, the tourists and visitors, who every season travel in Mexico, this year seem to be charged with an unusual number of commissions from manufacturers and dealers at home to ask about the chance for selling their lines of goods.

There are three kinds of inquirers:

(1) Those who after seeking the information and receiving it reply that they know all about their own business and are not going to change their methods to suit Mexican buyers or foreign buyers anywhere. This class occasionally may make a sale because of the novelty of their goods or because geographical proximity enables them to fill an emergency order quicker than can be done in Europe. But they never will permanently enlarge the volume of United States exports to Mexico.

(2) Those who politely acknowledge the information received, file it away, and pay no further attention to it. This class also will fail to build up a lasting business in Mexico.

(3) Those who acknowledge the information, digest it, seek to put it in force, and when in doubt do not hesitate to ask for further details. This class always will be sure of courteous and explicit answers from the consuls and importers and will be given the aid that is desired. With them it rests to build up a permanent American trade, and for their benefit some of the essential conditions are set forth in detail.

CUSTOMS REGULATIONS.

It is necessary for the American manufacturer and shipper to know the cardinal facts respecting the Mexican tariff system and its application. These are that the duties are specific, that they are fixed according to weight, that the metric is the officially recognized system of weights and measures, that the general regulations in regard to numbering, classifying, etc., are enforced by a system of fines which in effect increase the duties. It should be known that the new tariff, which went into effect in September, 1905, materially modified the old system of classification. I recommend that every shipper and manufacturer who is selling goods in Mexico, or who wants to sell goods there, obtain a copy of this tariff with the notes regarding the schedules as promulgated by the Mexican treasury department. The translation made by the Bureau of Statistics of the Department of Commerce and Labor is very clear and comprehensive.^a

PACKING AND INVOICING.

Until personal investigation showed me otherwise I supposed that owing to the nearness of Mexico and the ease with which the points could be obtained, American shippers were not neglecting this important factor in export trade. But the astonishing number of illustrations of bad packing brought to my attention convinced me of my error. Some of the most glaring instances I have described in a pre-

^a See Customs Tariff of the Republic of Mexico, Department of Commerce and Labor, Bureau of Statistics, Washington, 1905.

liminary report.^a But it seems necessary to go deeper into the subject. The losses apply both to all-rail carriage and to carriage by water and rail. The docks and wharves at the ports of Veracruz and Tampico daily afford evidence that shippers often ignore the fact that transshipment will be necessary. There is no excuse for any shipper in the United States failing to pack goods properly through lack of means of information. The transportation companies, in order to protect themselves from excessive and unjust claims for damages, afford every facility through their customs brokers and other agents for instructing manufacturers in what is necessary to be done. The shipping lists of the importers are usually to be obtained on application.

One leading cause of loss to the shipper (because the importer will not stand it) is the failure to observe the difference between legal and gross weight as enforced by the customs authorities. The profit in a shipment is often lost through indifference to this point. Goods have reached Mexico invoiced and shipped on blanks for Canada, where the ad valorem tariff schedules and methods of administration are radically different from those of Mexico. Railroad bills of lading have been forwarded as though nothing else were required.

SEAT OF THE TROUBLE.

In some instances the trouble is not at the factory, but is due to the carelessness of the forwarding agents, and in other cases the deficiencies are the fault of commission agents who have not stated that the goods are for export and should be packed with especial reference to transportation. Yet as a whole the majority of the bad shipments are due to indifference and carelessness in the shipping department or at the factory. It is part of the American habit of indifference to detail. In many cases the consuls have taken the pains to note the delinquencies and to write the shippers of their mistakes. Sometimes they receive thanks and sometimes rebukes. But it would not be practicable for them to report to the individual shipper every case of bad packing, and even if it were this irksome duty should not be imposed upon them.

Careless packing is the more inexcusable because American manufacturers have shown that when they so desire they are able to put up their goods both securely and attractively, and attractive packing is one means of increasing trade. Nor is the habit of indifferent packing universal. The Singer Sewing Machine Company, the General Electric Company, and some other manufacturing concerns which have a large Mexican trade, pack their goods both securely and scientifically. So do the mail-order houses which are building up a business in Mexico. What the big manufacturing concern can do the small manufacturer also can do. Until he learns to do it his trade will be limited.

^a See Daily Consular and Trade Reports, No. 2460, January 12, 1906.

The packing of cased goods in flimsy white-pine boxes is one of the most common instances, while the packing and hooping of baled goods with weak fastenings and cheap coverings is another instance.

As respects shipping-list forms,^a the necessary blanks always can be obtained from the importer, with instructions concerning the data necessary for the blanks which the customs broker or commission agent will fill in. He also will inform the shipper whether a consular invoice will be needed. Importers require the original invoice and shipping list to be sent direct to them. In making up an itemized invoice there is one essential condition that is often neglected. This is the full description of the article and the substance of which it is composed.

SUGGESTIONS CONCERNING CREDITS.

Another pertinent suggestion may be made especially for the benefit of manufacturers to whom the Mexican market is entirely a new one. This concerns credits. I have been much impressed with the recommendation of the sales agent of one of the largest corporations in the United States, who has had a wide practical experience in Mexico and whose headquarters are at the capital. His suggestion is that any manufacturer who wants to open up trade with Mexico should, as a preliminary step, obtain a list of firms which deal in his line of goods, determine the locality in which he desires to make sales, and then post himself fully regarding the mercantile rating of the houses with which he expects to do business. Information may be obtained through banks and similar sources. The commercial agency of R. G. Dun & Co. is now established in all parts of Mexico.

There is no firm worth selling to, whose standing can not be learned. The sales agent who makes this suggestion says that in many instances it will save the American exporter from entering into unsafe dealings, and when once he is satisfied of the soundness of the house to which he wants to sell, his operations will be greatly facilitated. This is a much better way than to secure orders by correspondence or personal solicitation, and then, being in doubt about filling them, to delay until the mercantile rating is obtained.

The commercial code of Mexico is a strict one and failures are relatively few. Where they do occur, the authorities step in to prevent preferences and other means of distributing assets unfairly to the general creditors. But the best way is to take no chances on failure, and that is by procuring the information as to credit in advance. American houses dealing extensively in mining machinery have a rule to get the cash for sales in Mexico as quickly as possible. Their customers are mostly other Americans.

^a See form of shipping list, page 31.

Assuming that the exporter in the United States has fully satisfied himself of the rating of his customer, the next point of friction relates to time of payment. It has been frequently pointed out that the system of long credits which obtains in all Spanish-American countries is strongly rooted in Mexico. Merchants will not accept the "cash-with-order" condition which manufacturing and exporting companies in the United States seek to impose. With many importers this is a matter of pride rather than of inability to meet the condition. European houses give from six to nine months and charge 6 per cent interest, which is cheerfully paid. American firms, themselves quick to take advantage of discounts and to turn over their capital, frequently are unable to understand why Mexican importers should not seize the same advantage. It may be attributed to the national habit or to any other cause, but the fact must be taken into consideration that the majority of Mexican business men are indifferent to the advantage of discounts. They prefer the long credits.

It is not probable that American exporters will agree to give credit of six to nine months, even with the certainty of 6 per cent or 7 per cent interest after the maturity of accounts. The practical question is whether they can not accommodate themselves to an adjustment and come to a compromise on credits. It is a very general opinion that many Mexican houses would be satisfied with from three to four months' credit in the United States as against six to nine months in Europe, and if the former period were given them they would transfer part of their trade. But they will not do it on a thirty-day or cash-discount basis. The testimony on this point is very strong. It reenforces the suggestion of the sales agent whom I have quoted, that the American shipper first thoroughly inform himself as to the credit of his prospective customer. When he is fully satisfied on that point it does not seem impracticable for him to extend the time of payment beyond that which he requires from his customer at home. When this approximation to the long credits granted by European houses is made the United States will begin to get a larger share of the Mexican trade. Longer credits are entirely feasible, because they can be properly safeguarded.

TRANSPORTATION RATES AND INTERNATIONAL COMPETITION.

Another element in European competition is that of transportation. Hamburg and Liverpool are able to lay down many classes of goods at the ports of Tampico and Veracruz as cheaply, comparatively, as are New York and Boston. This substantial equality in ocean freight rates should not be overlooked, but it is no reason why shippers in the United States should not avail themselves both of ocean and of rail transportation. An understanding of the transport facilities is

gained through a comparison of the imports by the different gateways and ports. In 1904 the imports, in gold values, were as follows:

Tampico.....	\$12,688,000
Veracruz	26,732,000
El Paso.....	8,421,000
Eagle Pass.....	6,107,000
Laredo	8,160,000
Pacific and other ports and gateways.....	16,200,000

Since then the total has increased at most of the ports, but the ratio has not changed materially. For the calendar year 1905 the exports from the United States through the Mexican border ports amounted to \$29,348,000.

This shows that though the United States, and especially the Mississippi Valley, has the decided advantage of proximity to the Mexican markets, nevertheless the value of the importations through the ocean ports is much larger than across the border. Practically all the European importations are through the two Gulf entrepôts. Veracruz leads in general merchandise, while Tampico, by reason of its imports of coal and its exports of bullion, leads in tonnage.

England has lost Mexican customers because of her inability to compete with the United States in supplying mining and similar machinery. She yielded the heavy hardware trade. Germany, through the fact that the leading houses in this line are of German origin, has held some of this business, but is slowly accepting the conditions enforced by geography, and German firms are filling their shelves with hardware from the United States. France holds her own in fine dry goods.

TRADE IN GROCERIES.

The grocery trade is largely controlled by firms of Spanish origin. They have had to concede a loss in packing-house products because of the advantage of the United States through proximity, and lately American groceries also have been encroaching upon them. However, prejudice is very strong, and these concerns, in their dislike of the United States and their unwillingness to handle our products, have been very stubborn. A European commercial traveler familiar with the undercurrents in the import trade is my authority for the statement that two leading houses at Veracruz lost during the last year \$400,000 and \$500,000, respectively, in the amount of their business through the growth of American products. While the European firms in Mexico are not so stubborn as this, and while they will buy in the United States rather than lose custom, yet they must have special inducements as to quality, price, or novelty, and often their purchases are only to fill emergency orders. They will not bother to repeat and reiterate directions in regards to shipping, packing, etc. This is another reason why the American shipper should post himself fully in regard to the Mexican tariff regulations and the methods of packing as well as other details.

HINTS FOR COMMERCIAL DRUMMING.

Commercial drumming, on the basis of the suggestions made above, promises to secure an increase in the percentage as well as in the volume of the United States exports to Mexico. This, like bad packing, is an old, old story, but it has to be told again and again to impress it on American firms. The traveling men must know the Spanish language and must adapt themselves to the local peculiarities and conditions. Instead of hunting up trade in a rush, and covering a certain number of towns in a given time, they must learn that it pays to be leisurely. The Mexican business man will not be rushed. He will not look at samples on the run, and he will not give orders at a gallop. But when once his custom is secured it is stable and valuable.

There are localities in Mexico which seem almost not to have been discovered by American firms. The city of Puebla, with a population of over 100,000, and situated in the center of a district of great agricultural and industrial wealth, is practically a stranger to American goods, though European firms do a lucrative business. Two or three enterprising shoe houses have established retail stores for the sale of their specialties, and that is about all that can be seen of the products of the United States. Without a doubt commercial travelers with staying qualities, who would study the advantages of this market on the ground, and then would take the time to break through the crust of local antipathy, would build up a permanent trade. Other localities are equally inviting.

THE SURPLUS STOCK THEORY.

An additional word of caution may be given against spasmodic sales of surplus stock. The American manufacturer occasionally is able to dispose of some surplus stock in Mexico, usually because he offers it at a bargain. But when, after an interval of three or four years, he finds himself again overstocked and seeks his Mexican customers they have left him. They remember the indifference and the neglect with which their orders were treated when the mills at home were too busy to fill promptly the orders sent them. They will take no chances on another experience of this kind.

Concerning catalogues it should not be said that they are entirely useless, especially the illustrated ones. But they serve a purpose only in aiding the drummer with his samples and in providing for future orders. The hundreds of thousands of catalogues and circulars sent through the mails to Mexico do not on the average pay their own postage in the aggregate of business secured.

COMMERCIAL TRAINING AND TRADE-MARKS.

Some further general suggestions occur. One is that a Pan-American business college be established at some convenient point, probably in Texas. The basis would have to be knowledge of the Spanish language and practical instruction in the business methods of Mexico as

well as in the nature of the demand for the products of the United States. Another suggestion relates to trade-marks. The Mexican trade-mark laws are clear and are broad enough to protect foreigners. But any goods which are covered by trade-marks should have this protection assured before they are sold. If not, native or German imitations are apt to appear. The registry of trade-marks and the other formalities should be attended to by some attorney. It should also be known that persons engaging in business in Mexico, under the provisions of the commercial code, are required to keep their accounts in Spanish, but may have a duplicate set for their private use in any other language.

GROWTH OF BOOT AND SHOE IMPORTS.

I indicate a few of the lines of trade which are of special interest to manufactures in the United States. Great progress has been shown in the boot and shoe exports. Headway has been made both against established European trade and in the face of special tariff advantages given to the native industry. In 1897 the value of the imports from the United States of leather and its manufactures was \$123,000; in 1903, \$800,000; in 1904, \$1,061,000; and in 1905, \$1,393,000. More specifically, in the calendar year 1904, 550,290 pairs of boots and shoes, valued at \$878,000, were imported into Mexico from the United States; while in 1905 the importations amounted to 847,100 pairs, valued at \$1,435,000.

This growth began when American manufacturers commenced to pay attention to the styles of footwear which would suit Mexican buyers and adapted their lasts to the local customs, though not following the very narrow pointed shoes which up to that time had been fashionable. Comfort, durability, and price all had something to do with the increase in patronage, as did advertising and drumming. The opening of American shoe stores by concerns which handled only their own specialties helped to make American footwear generally known. Competition caused a marked lowering of retail prices, and while the price of good footwear in Mexico is still high as compared with the United States it is not beyond the reach of a large number of buyers.

It is a mistake to assume that this market has limits which will soon be reached. An unwarranted assumption is that the peons, or bulk of the agricultural and laboring population, always will be content with coarse sandals held by rawhide thongs or else with going barefoot. The truth is that even the poorest classes every year buy more and more footwear. A hint for wide-awake manufacturers may be had from the observation of tourists, who note that in many localities while the parents go barefoot they manage to provide shoes for their children.

There is a Mexican shoe industry, and it is protected by heavy tariff duties which were increased under schedules that went into effect in September, 1905. The duty is laid on sole leather as well as on uppers and the finished product. The Mexican manufacturers also have tried to imitate the American patterns, but the sole leather is badly tanned and the boots and shoes lack durability. Mexican consumers find this out and soon turn again to the American goods. Manufacturers in the United States would do well to study carefully the tariff classifications and note the difference in duties according to the article. I have had my attention called to many shipments of a miscellaneous character on which the highest duty is laid, whereas if more care had been taken the lower rate would have been obtained on the bulk of the shipment. The greatest success up to this time has been secured by the houses which handle their own specialties and which by establishing branch stores secure the retail trade. These concerns also advertise. They start in localities where groups of Americans are settled. Their enterprise has helped to make known American shoes generally and to open a way for factories in the United States to reach the Mexican jobbing trade, which will not push any line of goods until the local demand is apparent. Systematic and thorough drumming by American firms undoubtedly will largely increase the call for American shoes because their popularity is already established.

COTTONS SUPPLIED BY NATIVE MILLS.

In regard to cottons, while a market exists for American goods it is outside the coarse goods which are supplied by the local mills. Its extension will depend on the enterprise with which fancy patterns and novel designs are pushed. There is no prejudice against American calicoes, but the demand for the cheaper grades is met by the home factories which have practically crowded out the products of the Manchester mills and caused a noticeable loss to the English factories. The Mexican tariff schedules on yarns and textiles and even on raw unginned and ginned cotton are relatively high. But the Mexican mills can not make themselves independent of raw cotton from the United States because the quality of their own production is inferior. The fabrics can not be made sufficiently strong without an admixture of long-fiber American cotton.

Though the acreage in the Laguna district, in the State of Coahuila, which is the chief center of production, is constantly extending, and though the experiments in other sections are encouraging, the gain is in quantity, not in quality. The Mexican mills now take about \$3,000,000 worth of raw cotton from the United States. The imports for 1905 were valued at \$2,856,000 as against \$3,167,000 in the previ-

ous year, but the quantity was larger by 1,000 bales. The imports of cotton manufactures amounted to \$1,000,000.

The exact condition of the cotton industry appears from a statement received through the courtesy of the Mexican treasury department. This shows that during the fiscal year 1905 the total consumption of cotton was 31,230,244 kilograms or 68,706,537 pounds, and the estimated sales \$51,214,000, Mexican currency, which, allowing for the fluctuations of silver during several months of 1904, probably exceeded \$25,000,000, gold. The total number of operatives is over 30,000. The statement in detail, including the location of the mills, follows:

CONDITION OF COTTON INDUSTRY OF MEXICO.

State.	Mills.	Stamp ma- chines.	Spindles.	Looms.	Opera- tives.	Kilos (2.2 pounds) consumed.	Estimated sales (Mexican currency).
Coahuila	11	1	51,719	1,757	2,105	1,910,774	\$2,642,730.73
Colima	2		2,388	44	122	158,398	85,843.19
Chiapas	1		2,552	85	150	157,749	196,273.68
Chihuahua	3		7,064	290	426	584,034	742,022.80
Durango	8		23,404	802	1,080	1,013,584	1,118,281.99
Federal District (Mexico City) ..	11	11	53,148	1,183	2,802	2,406,823	6,577,699.39
Guanajuato	6		28,304	739	1,245	1,985,317	2,062,304.33
Guerrero	1		2,598	101	162	141,146	124,727.35
Hidalgo	3		8,896	210	388	292,092	454,277.25
Jalisco	5	1	50,907	1,843	1,917	1,366,933	1,393,919.04
Mexico	7		41,460	1,336	1,831	1,782,554	1,983,434.86
Michoacan	4		12,724	356	885	680,208	794,691.84
Nuevo Leon	4		18,892	608	877	658,121	1,009,513.14
Oaxaca	3		16,565	523	570	618,668	801,516.36
Puebla	29	5	155,830	5,419	5,679	7,866,734	13,497,342.63
Queretaro	4	3	25,910	706	1,260	766,144	1,587,298.91
San Luis Potosi	1		5,120	142	250	157,420	181,363.42
Sinaloa	3		6,456	238	304	204,639	156,815.10
Sonora	1		5,726	167	244	240,289	387,426.73
Tepec	3		13,024	359	605	508,339	723,111.79
Tlaxcala	9	4	31,542	1,101	1,434	1,707,354	3,015,501.58
Veracruz	9	13	118,829	4,517	5,876	6,072,929	11,728,329.69
Total	128	38	678,068	22,021	30,162	31,230,244	51,214,425.80

MARKET FOR FURNITURE.

The furniture field is one of the most promising for the extension of American trade, especially on the part of the small manufacturer. Much of the household and some of the office furniture in use in Mexico is handmade. The high-grade office fixtures come from Europe, yet this is a line of manufacture in which Americans excel, and they should control the Mexican trade. There is a wide margin of profit. While the imports of timber and lumber are large, the sales of furniture advance slowly and have not yet reached the million-dollar mark. By the universal testimony, the failure to secure a continuous growth is due largely to lack of persistent drumming and the carelessness or indifference of the shippers in not observing the regulations in regard to packing and tariff duties, so as to prevent damage and avoid customs fines.

For the benefit of the trade I append a sample shipping list form of one of the largest importing houses in Mexico. By a careful study of the tariff schedules and by observing these instructions annoyance at the custom-houses may be avoided, and the goods be admitted at the proper rate of duty instead of being subject to fines and to the highest classification. The shipping form is as follows:

Shipping list of goods billed this day to Messrs. ———, Mexico City, Mex., and shipped or delivered via ———, by ———, address ———, date ———, 190—, as shown on accompanying invoice.

IMPORTANT.—Please fill this out accurately, devoting a line to each package, adding sufficient blank paper and filling in every column in each line. In case of direct shipment to us, mail us your original invoice, one copy of shipping list on these blanks, and original bill of lading, and mail to the customs agent at the frontier one copy of invoice, one copy of shipping list on these blanks, and duplicate bill of lading.

In case you deliver goods to a forwarding agent designated by us, deliver to him one copy of invoice and one copy of shipping list on these blanks, and mail duplicate shipping list to us with your original invoice.

If furniture, specify kind of wood; and if common wood, in imitation of mahogany or walnut, please so state in this list. Do not pack furniture of different woods or with different kinds of upholstery in the same package.

If furniture is upholstered, inlaid, metal ornamented, or veneered, so state in this list. If upholstered with cloth, state whether or not it contains silk. If veneered in whole or in part, so state, giving kind of wood used in the veneer.

Mark each package with a different number, and specify same in this list, as well as its exact gross and legal weights.

Remove all mirrors from furniture and frames and pack them separate from all else, specifying in this list "over (or under) 29 inches" in their longest dimension, as the case may be.

To prevent loss, pack separately and securely all removable hardware and other small pieces, and describe accurately in this list.

Legal weight is the weight of goods plus the weight of interior wrapping, cardboard boxes, etc., in which goods are contained, but not including the outside protecting case, crate, or burlap, or any loose excelsior or other loose packing used between the outside covering and its contents. *Gross weight* is the combined weight of goods and all interior and exterior packing.

Consecutive package numbers.	Number of pieces contained in package.	Factory or catalogue number.	Description of goods. (Do not abbreviate.)	Of what material constructed.	Pounds, gross weight.	Pounds, legal weight.

IRRIGATION AND AGRICULTURE.

A factor in the increase of Mexican purchases, because it is providing a larger population, is the tendency now manifest to exploit the agricultural resources of the country and bring them possibly to a level with the mining industry. It hardly needs to be explained that for the full development of Mexican agriculture irrigation is essential. Both the Federal and the State governments are encouraging the diversion of the water courses for this purpose as well as for manufacturing. The Government has not yet entered on extensive and comprehensive measures, such as those provided for in the reclamation service of the United States, but it has made a beginning and is considering the problems of irrigation on a large scale. Moreover, it has given indorsement and support to many private enterprises for bringing large sections of land under cultivation.

Mexico through its variety of climatic regions and soil offers opportunities for all kinds of agriculture—tropical, semitropical, and temperate. Continuous cropping is the inducement. Common, everyday farming—that is, the raising of wheat, corn, barley, alfalfa, and other staple crops—is likely to draw increasing numbers of farmers from the United States as irrigation advances and the great haciendas or estates are broken up, so as to encourage the investment of small capital; but tropical agriculture, including fruit raising, is also entirely practicable.

AGRICULTURAL IMPLEMENTS.

Agricultural implements from the United States have not made much headway in Mexico. No year yet has shown importations to the value of \$500,000. This, however, is not entirely due to lack of enterprise. The improved farm machinery which is used on some of the great Mexican plantations is still seen in contrast with the crooked sticks which the natives use for plowing. The bulk of the purchases of implements is still for the unprogressive peons. American manufacturers who have sought to cultivate this field complain that it is limited because the native will have nothing except the wooden plow of his ancestors. Nevertheless, by persistence a market has been built up in some sections. Farm wagons in the northern regions have been measurably successful. With the growth of immigration from the United States the sale of agricultural implements will probably expand to profitable proportions. In the meantime something more may be done by establishing branch agencies and by constant work in all the farming regions. In the shipment of farm implements of all kinds, including vehicles, the observance of the fact that the tariff is levied on each article by weight is of prime importance.

COFFEE AND SUGAR CANE.

Coffee cultivation has been successfully carried on by American planters in the States of Veracruz, Oaxaca, and Chiapas. The uplands, which are the best for coffee, modify the tropical conditions, and the climate is not antagonistic to settlers from the north. The planters who have obtained the best results are those who have taken care to secure estates near groups of population, which insure the cheap labor of women and children that is necessary to make the industry a paying one. While the profits from coffee are variable and dependent on the world's demand, yet the average price through a given series of years offers margin enough to encourage the investment of capital, and the success of Americans who have made investments show that others may safely do the same. The annual exportations are about 44,000,000 pounds, though in some years they have risen to higher figures.

The Mexican cane-sugar industry is widely distributed as to localities and may be called an intermittent one. It can not be said to be on a scientific basis, as in Cuba or Hawaii. The State of Morelos has the largest area of cane cultivation, but in Oaxaca and Veracruz are also excellent sugar lands, and likewise in the Gulf region in the State of Tamaulipas. On the Pacific coast in the State of Sinaloa, where irrigation is employed, are a number of very good plantations. But generally neither the cultivation of the cane nor the mills is on the modern basis, and economical management is lacking.

After supplying the home demand, which it yet fails to do, the Mexican sugar industry must depend for some of its profit on the exports. In the last year these were approximately 39,000 metric tons of 2,204 pounds, or nearly 86,000,000 pounds. Usually the Mexican planters do not sell their product by contract, but ship it to the foreign markets and get the best price which prevails at the time of shipment. Notwithstanding the lowered price during the last year, the production was as a whole profitable because of local conditions. Instead of manufacturing the sugar, much of the cane was turned into alcohol or rum. Owing to the scarcity of corn for distillation, there was an active home market for cane rum. This condition can not always be relied on, yet with full allowance for beet-sugar competition in Europe and for the Cuban product there appears to be ample opening in Mexico for the expansion of the sugar industry on a basis of more economical production and of modern facilities for grinding the cane. But it is business in which only those who have had experience in raising sugar in Louisiana, the West Indies, or elsewhere should embark. The conditions which encourage the small planter to raise the cane and deliver it to the central mill for grinding are not yet fully developed. When this basis becomes more general and more central mills are established, cane lands will have added value.

COTTON, HENEQUEN, RUBBER, AND TIMBER.

Cotton cultivation is extending and is no longer confined to the Laguna district. It is carried on with some degree of success in a limited region of Sonora, and encouragement is given near the coffee belt along the Isthmus of Tehuantepec, and also along the Rio Grande, where the conditions are similar to those in Texas. Scarcity of field hands, however, is a drawback, and one should ascertain the labor conditions before undertaking cotton cultivation in any given region.

The culture of the fiber plants—henequen, ixtle, and other kinds of textile grasses—is not confined to Yucatan, though that region will continue to be the main source of supply. Whether the henequen of Yucatan can be commercially cultivated on a large scale in other regions is still open to doubt, but there is encouragement in the fiber known as “zapupe.” Its cultivation is now being carried on by planters in the neighborhood of Tampico and in other sections of the State of Tamaulipas. Some Americans who own land along the Rio Grande border in the vicinity of Laredo are proposing to introduce it there.

The success of rubber cultivation is still disputed and there is little to add to the series of reports made by the American consuls. Some of the plantations on the Isthmus of Tehuantepec, especially those owned by Mexicans, are said to be proving commercially profitable and hope is held out that the investment of American money, much of it reckless, may bring ultimate returns, though this will not be to the original investors. The late Consul-General Parsons in his last annual report indicated some faith in the future of rubber growing. But at the earliest there can be no return from the cultivated tree short of ten or twelve years, and this field is not one that appeals to planters and investors who want to turn over their capital in a shorter time. The discovery that guayule, a species of grass or shrub, could be manufactured into rubber by chemical processes has given encouragement to it as distinct from the rubber tree, and American capital has invested in a large plant located at Torreon.

The advantages and drawbacks of ranching in Mexico are so well known that they do not need to be described. A considerable amount of American capital is engaged in this industry, especially in the northern States. For the farmer with small capital there is an undoubted field to engage in dairy farming in some localities.

The exploitation of new timber areas has begun. The scarcity of pine in the United States has caused American lumbermen to turn their eyes to the Sierra Madre regions, where the most extensive forests lie. Some large tracts have been purchased, not for immediate development, but as reserves for the near future. The lack of transportation facilities has made lumbermen cautious, but several of the railway projects which are now assured of realization are partly based on getting into the timber regions. The exploitation of these timber areas enlarges the prospects of agricultural development later.

THE IMMIGRATION MOVEMENT.

I have briefly sketched the agricultural conditions because they are the foundation of an immigration movement which promises to reach large proportions. Next to the financial stability secured through the monetary laws immigration is undoubtedly the most important economic development in Mexico to-day. The Federal and State governments and private companies are seeking the sources for a permanent increase in population. They look to it chiefly as something to come from the United States, but there is also an effort to secure European colonists, and a little encouragement has been given to the locating of small colonies of Asiatics—Japanese and Chinese. But no general effort along the latter line is probable.

Contracts have been made to secure lands from the Government for European colonists. One, which was concluded in November, 1905, was with agents who agreed to establish on lands in Chihuahua within ten years 500 settlers of Austro-Hungarian and German nationalities, the immigrants to be brought to Mexico in family groups. Under this contract the Government agreed to cede gratuitously 250 acres of the land for each family settled thereon, and certain exemptions were granted them as inducements. Other propositions relate to Italian immigrants, for whom many of the regions of Mexico would be especially suitable. It can not be said that there is yet a concerted and thoroughly worked out plan of European colonization, but there is significance in the fact that this immigration is receiving attention and that some experiments in bringing European settlers are already underway. They have especial reference to reinforcing the native Mexican stock of agricultural laborers.

For the present the most important and the most tangible immigration plans relate to settlers from the United States. The movement is not confined to any one locality, for groups of Americans have located in northern Chihuahua, along the Pacific coast, in the rich agricultural districts of Jalisco, in the Gulf regions, in southeastern Mexico on the Isthmus of Tehuantepec, and some are pushing into the State of Chiapas on the border of Guatemala.

Those who settle in the central table-land are interested chiefly in the cultivation of the cereals, and their increase will depend on the degree to which irrigation opens up farming lands. Along the Pacific coast in Sonora and Sinaloa the movement relates to the cultivation of the tropical and the temperate products, which include corn, alfalfa, chick-peas or garbanzos, and other vegetables, fruits, and sugar cane. Irrigation here is also the largest factor of success. The rivers afford abundant sources of water supply, and the success thus far attending the building of irrigating canals gives great promise for the coming years. The alluvial soil is very productive. In the Gulf regions and in southeastern Mexico the fiber plants and all kinds of tropical products are the inducement.

AMERICAN COLONISTS AND SETTLERS.

The most successful colonies up to this time have been those of the Mormons in northern Chihuahua. Their experience in turning deserts into gardens by means of irrigation has been utilized and the result is shown in the little paradises that they have been created.

In the State of Tamaulipas the colony known as the "Blalock" is now claimed to be harmonious and successful. Various plans for establishing colonies of Zionists in these regions have not been consummated, one reason being the inability to come to an agreement in the purchase of lands. Large tracts have been bought by syndicates, whose purpose is to subdivide and sell to individual farmers without regard to the community principle. While the utility of some of the colonies based on religious or other ties is recognized, a decided preference is shown for securing groups of Americans who have simply the common tie of association and of mutual interest.

Up to this time settlers and colonists from the United States have shown excellent sense in one respect. They have insisted on keeping within reasonable distance of existing railroads or of railway lines whose extensions are assured. They have not been induced to settle in regions where they must remain indefinitely without means of transportation for their products. On the Pacific coast the railway extension that opens up the Yaqui River Valley in Sonora and hitherto inaccessible districts of Sinaloa has been the basis of land enterprises which already have secured groups of settlers and which promise to secure more. On the Isthmus of Tehuantepec the railroad has a similar influence, and it is due to railway extensions that groups of Americans are now pushing down into Chiapas.

Generally the immigration movement from the United States is a geographical one along longitudinal lines—that is, Chihuahua and the middle northern States of Mexico get their first immigrants from central Texas and north; the Gulf regions receive their new settlers from eastern Texas and Oklahoma; and the Pacific coast regions have their influx of population from California. Similarity of climatic conditions is one reason for this. In the Sonora and Sinaloa districts and south to the State of Guerrero the climate is not dissimilar to southern California. The weather record of temperature, rainfall, etc., in the city of Culiacan, Sinaloa, through ten months of 1905, beginning with March, showed an average highest daily temperature of 91.4° F.; average lowest temperature, 65.1°; average temperature all day, 79.6°; average number of clear days per month, 20.2; average number of cloudy days, 4.1; average number of variable days, 6.3; highest temperature, 99°; lowest temperature, 37°; rainfall during rainy season (June to October), 48.9 inches.

On the Gulf coast at Tampico and elsewhere the records are substantially similar as to temperature. In the plateaus the average

temperature is lower and there is also the lack of rainfall. In the State of Veracruz and on the Isthmus of Tehuantepec the variations are not marked. Information of this kind is something that intending settlers should possess themselves of, because it will enable them to understand more clearly what are the conditions not only of crop raising but of living.

ADMONITIONS FOR LAND BUYERS.

Further points for the benefit of colonists and investors in agricultural lands may be covered in short space. A long series of painstaking reports made by the consuls in order to prevent small investors in the United States from being drawn into swindling stock companies based on tropical plantations which promised impossible returns, and which in some cases paid one or two unearned dividends out of the capital, did not fully achieve the purpose. Many thousand persons still lament the confidence which they placed in glowing prospectuses. If some of these criminal enterprises had had honest management, the drawbacks from inexperience and extravagance in time might have been overcome and the confiding investors have been repaid. I have seen a number of those plantations which could have been made reasonably profitable. But since the whole purpose of the companies was to cultivate gullible stockholders instead of cultivating the ground, no serious effort was made with the plantations.

Nothing can change this fact—the school-teacher, the clerk, the college professor, the artisan, the seamstress, the day laborer, with only a few hundred dollars savings, has no right to risk them in Mexican stock companies, particularly of the tropical plantation sort. They might better take their little hoard and throw it into the sea and leave a record for their grandchildren of the place where the bubbles came up than to put it into the hands of stock company promoters with the hope that either they or their grandchildren will get it back.

But there is a genuine and legitimate basis for American settlers in Mexico who take with them their own small capital and who propose to cultivate the soil. They will find that Mexican land companies which are reputable hold out inducements that can not always be fulfilled, and they must exercise the same caution that they would show in the United States. They should not discredit the companies, but should remember that the enthusiasm of the land seller always and everywhere should be tempered by the more critical judgment of the buyer, and they should take proper means to learn what they are buying. One American settler in Mexico who has thoroughly satisfied himself in advance and who therefore remains as a contented colonist is worth more in securing immigration than a hundred heedless buyers who are almost certain to become dissatisfied.

Land values range from 50 cents gold per acre upward, according to location, accessibility, improvements, and other causes, and no general

statement can be made except for the prospective land buyer either to make a personal investigation himself or to join with others and secure the services of some competent person. Well-meaning clergymen, school-teachers, physicians, and even bankers are not the best judges of land conditions and crop prospects in Mexico, though these classes were the mainstay of the promoters of the swindling tropical plantation companies. Practical farmers, though they may not have been engaged in exactly the same kind of agriculture as that of Mexico, are much better judges of the soil and its capabilities. This cardinal point settled, there are then the questions of titles, the local taxes, labor, farm animals, timber for building or for firewood, prices of goods that must be bought for consumption, transportation facilities, markets, and prices which the products of the soil will command.^a

A matter of some importance in land values is that the purchases of the original companies usually are made in terms of Mexican currency—that is, in just half the value of United States money—and then the purchase of a given tract is exploited as though it had been for, say, \$100,000 American gold. In forming an opinion on values the intending buyer should always make sure whether he is paying in United States dollars, worth \$1, what was bought for Mexican *pesos* or dollars, worth 50 cents.

The Mexican Government exempts from duties furniture and household goods of not over \$500 value, gold, when brought into the country by settlers for their exclusive use. But there are certain formalities which must be complied with, and information on this point should be obtained from the American consuls or by direct application to the treasury department (*secretaria de hacienda*) in the City of Mexico. The subject is covered in an executive decree issued in March, 1904.

BARRIER OF BIG ESTATES.

Related to the question of immigration is that of the enormous holdings of many Mexican landowners. Heretofore these huge estates have not been considered as retarding the development of the country; but with the extension of the railways, the progress of irrigation, and

^a A suggestion from Mexican official sources for the benefit of those who propose to make investments in agricultural enterprises is that they take advantage of the following sources of information: The local banks, of which there is at least one in almost every one of the States of the Republic; the Banco Internacional and Hipotecario and the Banco Agricola and Hipotecario, established in the City of Mexico, since they have ample means of information; the chambers of commerce established in all the capitals of the States; the Society of Agriculture of Mexico, which is composed of the leading agriculturists and has ramifications throughout the territory of the Republic; and, finally, the Compania Financiera Internacional, with headquarters in the City of Mexico, which is under Government inspection and which is charged with supplying information regarding every kind of business established in

